

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
)	
Inquiry Regarding Carrier Current Systems)	ET Docket No. 03-104
Including Broadband over Power Line)	
Systems)	
)	

REPLY COMMENTS OF UPLC

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August 20, 2003

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SUMMARY

The comments in response to the NOI prove that the Commission must focus on actual BPL operations, rather than rely on abstract theories and standards at this time. As the Commission recognizes, this is a nascent technology that does not yet adhere to an industry standard. The FCC need not and should not prescribe industry standards concerning bands of operation, injection methods and modulation schemes. Such standards will only discourage innovation. Instead, the benchmark should remain compliance with emission limits. In this way, the FCC may ensure that licensees are protected from potential interference.

The UPLC agrees that standards are important to demonstrate compliance with the Part 15 rules, and many industry comments have offered to work with the Commission to develop such standards. The UPLC supports the development of measurement standards, at the appropriate time. Further study is needed before any such standard should be adopted. Until further studies are completed, the FCC should continue to use existing measurement procedures, because these procedures are adequate to protect licensees from interference and are reliable.

In fact, the Part 15 rules as a whole are more than adequate to prevent interference, because field trials reportedly indicate that the limits are more stringent than necessary and, as an unlicensed service, BPL is prohibited from causing interference to and must accept interference from other licensees. As such, it is not necessary or appropriate to require notching – or worse to exclude BPL operations altogether in certain bands. Licensees operating in bands used by BPL are already protected from

interference under the current rules, and they may continue to rely on utilities to correct interference that should occur.

As providers of critical infrastructure communications, utilities are extremely sensitive to the issue of interference to others, as well as themselves. It simply defies reason that utilities would deploy BPL, if they were not absolutely sure that the systems were safe, reliable and would not interfere with licensed users. Ensuring the integrity of mission critical systems that provide essential and affordable electric service to the public is job-one. Utilities have expended significant time and resources to conduct rigorous BPL trials, in the laboratory and in the field. These trials have been conducted under the authority and supervision of the Commission, and experimental authority is expressly conditioned upon compliance with the Part 15 rules. The UPLC reiterates that the results of these tests have been encouraging, and appreciates the Commission's effort in this proceeding to reexamine the existing rules to find ways to further promote the public interest in improved energy services and broadband access/competition by BPL.

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Pursuant to Section 1.415 of the Federal Communications Commission (“FCC”) Rules, the United Power Line Council (“UPLC”) hereby submits its reply comments in response to the *Notice of Inquiry* in the above referenced proceeding.¹ The UPLC continues to believe that the existing rules adequately prevent interference to licensees, and supports rule changes that improve performance and reduce barriers to deployment of BPL systems.²

I. BPL would promote the public interest in improved energy services and broadband access/competition.

There is widespread interest and support among utilities for BPL. Not only would BPL support commercial services, such as high-speed Internet-access, but it would also support enhanced electric services, which is actually the primary interest among some utilities.³

¹ *Inquiry Regarding Carrier Current Systems, including Broadband over Power Line Systems*, Notice of Inquiry, ET Docket No. 03-104, 18 FCC Rcd. 8498 (2003) (“*BPL NOI*”).

² The Edison Electric Institute (EEI) joins in the Reply Comments of the UPLC. EEI is the association of the United States investor-owned electric utilities and industry associates worldwide. Its U.S. members serve 99 percent of all customers served by the shareholder segment of the U.S. industry.

³ Comments of Hawaiian Electric Company, Inc., at 1 (“Comments of HECO”) (stating that HECO’s interest in BPL is primarily enhanced utility operations with secondary interest in the potential for added services and related incremental revenue gains for the benefit of ratepayers and shareholders.); Comments

“Possible electric utility-focused applications include outage detection, home energy management, distribution transformer overload analysis, demand side management, Substation Control and Data Acquisition (“SCADA”) data transmission, monitoring of non-SCADA controlled substations, replacement of traditional intra-utility-based communications systems (copper wire and microwave), safety checks for isolated circuits, power quality monitoring, detection and diagnosis of events at capacitors and regulators, phase loss detection, line testing, outage localization and fault characterization.”⁴ Bottom line: that means more efficient, reliable and secure electric distribution systems. In fact, BPL may actually enable utilities to anticipate outages before they occur, rather than having to wait for customers to notify utilities when they lose power.⁵ Such internal applications from BPL may also complement existing utility systems, such as power line carrier, that are used to monitor and control electric services

of Florida Power & Light Company, at 4 (stating that FPL has a great interest in the potential of BPL to enhance utility operations and to reduce costs of utility operations, benefiting the FPL customers.)(“Comments of FPL”); and Comments of Southern LINC, Southern Telecom, Inc., and Southern Company Services, Inc., at 3-4 (stating that Southern has been following the development of BPL for a number of years because of the potential for this technology to support a number of initiatives that could result in significant benefits to Southern’s electric customers.)

⁴ Comments of PPL Telcom, Inc., at 4-5 (filed July 7, 2003)(“Comments of PPL Telcom”).

⁵Not only would this save the utility additional time and resources to trace the outage, but would help to relieve some of the burden from the telephone system that may be swamped by calls during a widespread outage, such as the one last week in the Northeast.

on transmission facilities.⁶ As such, BPL would serve the public interest in improving electric services with modern redundant communications systems.⁷

Of course, utilities also are interested in BPL to offer commercial services. Cinergy echoed the Commission that the “ubiquitous availability of broadband services will ‘bring valuable new services to consumers, stimulate economic activity, improve national productivity, and advance economic opportunity for the American public,’” adding that “BPL has the potential to bring broadband to everyone.”⁸ Florida Power & Light emphatically stated that “BPL is a viable technology,” and that “every electrical outlet could become part of a home-based, symmetrical internet network, with no new wiring or re-wiring.”⁹

Rural utilities are also interested in BPL for its ability to reach “areas that cannot be served by the other major alternatives (DSL and CATV),” and have urged the Commission to “do everything possible to aid and encourage the rollout of BPL

⁶BPL could extend the reach of such systems deeper into the network, allowing utilities to cost-effectively prevent localized faults from occurring or cascading over a wider area. However, the BPL systems are not considered a replacement for PLC systems, which have much better range/latency than BPL systems. See Section V, *infra*. See also, Reply comments of Southern LINC, Southern Telecom, Inc., and Southern Company Services, Inc. at Section III. B. (filed Aug. 20, 2003)(contrasting PLC systems with BPL systems).

⁷ See Chairman Michael K. Powell, “Digital Broadband Migration Part II,” Opening Remarks at Press Conference (October 23, 2001)(transcript available at <http://www.fcc.gov/Speeches/Powell/2001/spmkp109.html>) (supporting facilities-based competition to promote redundant communications systems that protect national security); see also Commissioner Kevin J. Martin, “Framework for Broadband Deployment,” Remarks at the National Summit on Broadband Deployment (October 26, 2001)(transcript available at <http://www.fcc.gov/Speeches/Martin/2001/spkjm101.html>) (“I believe the Government – particularly the Commission – should place a higher priority on facilities-based deployment and competition.”).

⁸ Comments of Cinergy Corp. at 3 (filed July 7, 2003), citing *Appropriate Framework for Broadband Access to the Internet over Wireline Facilities*, 17 FCC Rcd. 3019 at ¶ 1 (2002).

⁹ Comment of FPL at 2-3.

systems,” including “higher power limits in rural and sparsely populated areas.”¹⁰

Southern shares similar views that Access BPL is a facilities-based service that can be implemented in a number of network architectures, and would benefit from removal of regulatory uncertainty.¹¹ Together, these utilities represent a substantial competitor in the broadband market that are positioned to provide additional services over existing infrastructure to unserved and underserved customers that remain in a significant percentage of the country.¹²

II. The Commission need/should not adopt standards for BPL operations.

The comments by the industry reflect the fact that the technology is still evolving, and has not arrived at a standard yet. The UPLC encourages the Commission to allow this process to continue so that the industry may continue to improve BPL performance characteristics.¹³

The Commission should not require a single spectrum band, modulation scheme, or injection technique. First, it is not clear that such standards would have an impact with regard to potential interference. Moreover, as long as the industry must comply with

¹⁰ Comments of Allegheny Energy Service Corporation at 1 (filed July 7, 2003); and Comments of Consolidated Electrical Cooperative at 1 (filed July 31, 2003). *See also* Reply Comments of the American Public Power Association at 5 (filed July 28, 2003) (“Reply Comments of APPA”) (stating that it is “excited by the possibilities that these systems may permit its members to deliver broadband services over their existing infrastructure.”)

¹¹ *See* Comments of Southern at 7, 9, and 18 (stating that additional testing of BPL systems will show that the Part 15 rules can be further relaxed with respect to BPL systems without creating harmful interference to other spectrum users, which could greatly facilitate the provision of BPL to less populated areas.)

¹² *See generally* FCC Industry Analysis Division, *High-speed Services for Internet Access: Status as of December 31, 2002* (released June 1, 2003) at http://www.fcc.gov/Bureaus/Common_Carrier/Reports/FCC-State_Link/IAD/hspd0603.pdf.

¹³ *See also* Reply Comments of the APPA at 9 (stating that flexible rules for BPL are necessary, because BPL technology is in its infancy and the Commission should not impose standards that would preclude technological improvements.)

emission limits, it will operate using bands, techniques and standards that avoid creating interference. The same can be said for issues of interoperability, because market forces will dictate that different technologies work together. Therefore, the UPLC cautions the Commission against proceeding down a dead-end path towards operational standards that may well discourage the development of BPL systems.

Comments from the industry generally agree with this position. There has not been any interference between the In-House and Access systems during testing, and it does not appear that the Commission needs to designate frequencies for one use or another.¹⁴ Access BPL providers use various spectrum ranges,¹⁵ and tend to use either Direct Sequence Spread Spectrum (“DSSS”) or Orthogonal Frequency Division Multiplexing (“OFDM”) or both.¹⁶ Meanwhile, some Access BPL providers use differential mode or common mode injection techniques with either capacitive or inductive couplers.¹⁷ The point is that, “BPL is a nascent technology having few U.S.

¹⁴ See Comments of Ameren Energy Communications, Inc. at 4 (stating that “residences that use In-House BPL, but that do not subscribe to Access BPL (and do not utilize repeaters), are unlikely to experience interference,” because “the overhead network operates at a very low signal strength.”); Comments of Current Technologies, LLC at 17 (opposing any regulatory distinction between access and in-home systems, let alone dividing spectrum use between Access and In-House systems.); Comments of Electric Broadband at 4 (stating that it does not see a need for the Commission to dictate frequencies, modulation techniques, nor contention resolution rules.); and Comments of Phonex Broadband Corporation at 2 (stating that the FCC should not define BPL frequencies).

¹⁵ Compare Comments of Enikia at 1 (we believe that Access BPL will likely operate in the frequency range of 1 to 30 MHz) with Comments of Southern at 12 (Southern believes that commercial deployment of BPL will be primarily located in the 1.705 to 50 MHz band.) and Comments of Amperion at 4 (using the 1.7-30 MHz band during its trial deployments and suggesting using frequencies up to 50 MHz).

¹⁶ See Comments of Ambient at 5 (reporting that it uses OFDM modems); Comments of Amperion, Inc. at 4 (reporting that it uses OFDM); Comments of Current Technologies, LLC at 5, n. 3 (reporting that it uses OFDM modulation); Comments of Main.net Communications Ltd. at 4 (reporting that Main.net may implement other chipsets using these and other modulation techniques.); and Comments of PowerWAN, Inc. at 2 (reporting that it uses OFDM).

¹⁷ Comments of Ambient at 5 (reporting that it uses proprietary inductive couplers); Comments of Ameren at 7-8 (reporting that coupling must follow one of two methods: inductive or magnetic and that injection method will vary between systems.); Comments of Amperion at 2 (reporting that typically, one injector is

commercial customers at this writing, and no widely accepted technology standards, and that [a]pplying unnecessary rules to BPL in the interest of achieving some ill-defined parity with other services could cripple instead of catalyzing its viability as a broadband competitor.”¹⁸ Therefore, the FCC should not prescribe operational standards that may not have any bearing on interference.

III. The Commission should continue to rely on existing measurement standards and work with the industry to develop new standards that are consistent and repeatable.

Given the nascent state of the technology, the UPLC believes that it would be premature to adopt a measurement standard at this time, although the goal is laudable. The UPLC notes that many technology companies have expressed their interest in collaborating with the FCC to develop a standard.¹⁹ The UPLC joins with these companies and offers its assistance with such an effort, recognizing that industry-led standards are more likely to achieve the goal of reducing regulatory burdens and promoting “consistency and repeatability of test measurements.”²⁰

Likewise, the Commission should continue to rely on radiated emissions as the primary means of preventing interference. As Current Technologies notes, conducted

installed per MV feeder and that it uses an inductive coupler.); Comments of PowerWAN at 3 (reporting that it uses both capacitive and magnetic couplers to inject and extract the signal via a differential method).

¹⁸ Comments of Current Technologies, LLC at 13.

¹⁹ See Comments of Amperion, Inc. at 7-8 (stating that it would gladly participate in the development of a model for overhead and underground distribution systems upon which a typical network impedance model for an OATS or laboratory test would be based.); and Comments of Current Technologies, LLC at 18 (stating that it would welcome standardized reproducible test configurations that expedite emissions testing of BPL devices, and asking the Commission to collaborate with the BPL industry to develop standardized, reasonably representative, reproducible, laboratory-based configurations that can be constructed in a lab for testing both In-House and Access systems.)

²⁰ BPL NOI at 12.

emissions have “no direct bearing on interference.”²¹ Enikia agrees that “possible interference potential from BPL systems is radiated, not conducted.”²² Even if there was some correlation between conducted emissions and radiated emissions, more study is needed before a conducted emissions limit could be considered reliable.²³

IV. Existing Part 15 rules are adequate to prevent interference and could be clarified to promote the development of BPL systems.

Obviously, the most contentious issue in this proceeding is interference mitigation. Licensees in the bands used by BPL systems have uniformly opposed allowing any operations in those bands or have demanded reducing the emission limits (notching) in those bands.²⁴ That was one of the reasons that the UPLC opposed notching as a mitigation technique in its comments in this proceeding. Is notching effective? Yes. Is it appropriate? No, because it inevitably leads to a free-for-all that in the final analysis would prevent BPL operations in any band or reduce output power to the point that it could not compete with other broadband services in either cost or throughput. Moreover, dynamic solutions that achieve the same result are available.²⁵

²¹ Comments of Current Technologies, LLC at 16.

²² Comments of Enikia, LLC at 3 (filed July 8, 2003).

²³ *Accord* Comments of HomePlug at 8 (stating that if any conducted standard is defined, this standard should be based on sound science that demonstrates the relationship between conducted and radiated emissions.)

²⁴ *See e.g.* Comments of ARRL, the National Association for Amateur Radio at 10 (filed July 7, 2003) (“Comments of ARRL”)(emphasizing that ARRL has concluded that all Amateur medium-frequency and all VHF allocations must be avoided by any access or in-building BPL system, without exception); Comments of the Association for Maximum Service Television, Inc. and the National Association of Broadcasters at 2 (strongly opposing any BPL operations in the television broadcast bands.); and Comments of the North American Shortwave Association at 3 (recommending confining BPL operations to the 30-47 MHz range and excluding the internationally allocated bands between 2.0 and 5.5 MHz.).

²⁵ *See* Comments of Ambient Corporation at 8 (stating that OFDM permits BPL to avoid interference through what they call “agile notching”); and Comments of Main.net Communications Ltd. at 4 and 7

Finally, it would set a negative precedent if licensees succeed in stonewalling BPL systems, which are *unintentional* radiators, particularly as the Commission seeks unlicensed overlays in existing bands for *intentional* radiators, such as Wi-Fi.²⁶ As such, the UPLC urges the FCC not to adopt any proposal that would exclude BPL from or reduce the emission limits in a specific band.

The fact of the matter is that the Part 15 rules already adequately protect licensees in the bands of BPL operations. BPL operations must comply with radiated emission limits. Field tests indicate that these limits are more than adequate to prevent interference to licensed users.²⁷ BPL systems operate at extremely low power, and emissions reportedly drop off dramatically as distance increases from the lines.²⁸ Nor does it appear that the emissions from BPL would aggregate appreciably.²⁹ In addition to the emission limits, Part 15 includes a “catch-all” provision that operations must cease if interference occurs.³⁰ Despite alarmist claims of widespread interference from BPL

(reporting that notches can be defined remotely, so that the system will not transmit in any frequencies where there is an official request regarding interference.)

²⁶ See Commission Seeks Public Comment on Spectrum Policy Task Force Report, ET Docket No. 02-135, 17 FCC Rcd. 24,316 (2002). See also *In the Matter of Additional Spectrum for Unlicensed Devices Below 900 MHz and in the 3 GHz Band*, Notice of Inquiry in ET Docket No. 02-380, 17 FCC Rcd. 25632 (2002).

²⁷ See e.g. Comments of Southern at 18 (stating that Southern believes that testing will show that the Part 15 Rules can be relaxed, which could greatly facilitate the provision of BPL to less populated areas.)

²⁸ See e.g. Comments of Amperion, Inc. at 8 (stating that due to the low levels of unintentional RF radiation we have noted and the fact that the energy levels roll off quickly as you get farther from the MV wire, we do not believe our technology poses a particular risk of interference.)

²⁹ See e.g. Comments of Current Technologies, LLC at 14-15 (reporting that there is no harmful aggregation from thousands of BPL devices deployed in an area.)

³⁰ 47 C.F.R. § 15.5(c) (2002) (requiring operations to cease upon notification by a Commission representative that the devices is causing harmful interference and operation shall not resume until the condition causing the harmful interference is corrected.) See also Comments of Phonex Broadband Corporation at 3 (stating that FCC Part 15 rules therefore are already in place to control interference potential and to legally stop its use when a device is causing harmful interference.)

deployment,³¹ there have been no complaints in any of the trials in the U.S.,³² and BPL devices have been commercially deployed already for both In-Home and Access BPL.³³ Even so, the rules would protect licensees in the event that there ever were legitimate complaints.

One clarification of the Part 15 Rules that could go a long way towards promoting BPL deployment is that Access BPL is subject to Class A emission limits.

Fundamentally, this makes sense for Access BPL operations on MV lines, because they are located away from the home (i.e. non-residential), would only affect operations above 30 MHz, and would bring the limits closer in-line with those below 30 MHz. Not only would this improve the range of BPL, but it would improve the capacity on the MV lines by making it easier to use the spectrum above 30 MHz.³⁴ The industry uniformly

³¹ See e.g. Comments of ARRL at 2 (stating that “BPL is a Pandora’s Box of unprecedented proportions.”)

³² See e.g. Comments of Ameren at 9 (not a single reported instance of interference from BPL trial passing 300 homes); Comments of Amperion at 2 (Amperion equipment is compliant with Part 15 emission limits and we have had not complaints or instances of interference at any of these development sites); Comments of Hawaiian Electric Company at 4 (In HECO’s first three-month BPL deployment, no complaints for access or in-home related interference) ; Comments of Main.net Communications Ltd. at 6 (reporting that Main.net’s experience, including operation in the homes of active Amateur Radio licensees, has been that there is no interference); Comments of PowerWAN at 3 (Access field tests to date have not resulted in any complaints either from the customer or the customers’ neighbors.); Comments of PPL Telcom at 7 (testing and operation of both the BPL and AMR equipment in the trial locations indicate that there is no interference from the introduction of BPL technology); Comments of Progress Energy at 6-7 (there have been no reported instances of interference during the extensive field trials performed thus far at Progress Energy and at utilities we have communicated with.); and Comments of Southern at 19 (Southern is not aware of any reported cases of harmful interference from this technology);

³³ See e.g. Comments of Main.net Communications Ltd. at 2 (reporting that today, over 150,000 homes are passed by Main.net technology and over 10,000 households are using the technology.); and Comments of Phonex Broadband Corporation at 2 (reporting that Phonex has sold several thousand HomePlug-based BPL products with no complaints of interference.) See also “Winchester Broadband Vie Electricity Network”, ISP News (Aug. 20, 2003) at http://www.net4nowt.com/isp_news/news_article.asp?News_ID=1215 (note that the PLC deployment in Winchester follows deployments in Scotland, including two trials serving the rural isolated communities in Campbeltown and Crieff, and a commercial deployment in Stonehaven, Aberdeenshire.)

³⁴ Range would be increased through the ability to increase power. Bandwidth would be increased, because the Class A limits would encourage BPL technology to operate above 30 MHz, whereas many

supports this proposal, even though some do not presently operate above 30 MHz.³⁵

Moreover, the public interest benefits, particularly in rural broadband deployment, weigh heavily in favor of making this clarification. Therefore, the Commission should exercise its discretion in this proceeding to clarify that Access BPL systems on MV lines are subject to Class A emission limits.

V. BPL systems will not affect collocated telephone or cable equipment, nor will it impair power line carrier systems.

Other broadband technology providers and their associations seek to delay the deployment of BPL systems, while they consolidate the market.³⁶ The Commission must not take the bait. BPL systems have been exhaustively tested in the laboratory and the field, and there has been no interference to collocated telephone or cable television equipment, nor is there any indication that there would be. In fact, quite the opposite.

operate below 30 MHz presently. Thus, clarifying that Class A limits apply to BPL Access would improve performance where it is needed most – on the MV lines -- where capacity and range are at a premium.

³⁵ See Comments of Amperion at 6 (supporting Class A limits for equipment beyond 30 meters from a residence, especially equipment on MV wires with no LV conducted path into the home.); Comments of Current Technologies, LLC at 16-17 (supporting Class A limits for commercial and residential environments because Access BPL devices are either mounted high on a pole or enclosed within a metal curb-side housing.); Comments of Main.net Communications Ltd. at 5 (supporting Class A for MV wires and Class B for low voltage wires). See also Comments of Ambient Corporation at 5 (suggesting a 5-10 dB increase in power to overcome attenuation on lines on MV lines, and that the establishment of a continuity of field intensity limits above and below 30 MHz for a frequency range reaching at least 40 MHz would permit greater data rates on typical overhead lines.) and Comments of PowerWAN at 3 (supporting Class A emission limits for MV lines).

³⁶ See Comments of Sprint Corporation (filed July 7, 2003); Comments of Qwest Communications International, Inc. (filed July 7, 2003); and Comments of Verizon (filed July 7, 2003) (generally urging the FCC to investigate *potential* interference to DSL services from collocated BPL equipment). Not only do these comments fail to provide any adequate basis about interference, but some are self-contradictory, asking for deregulation of ILEC services due to competition from BPL services that they say should not be permitted without further study. These comments are transparently self-serving, and should be ignored. See also “DSL Forum Lauches DSL Home at Supercomm 2003 (June 4, 2003)” and see “DSL Forum Receives Support from Leading North American DSL Providers for its DSL Home Initiative (August 19, 2003)” at www.dslforum.org (indicating a strategy shift by ILEC DSL providers towards home networking, in addition to access, via DSL).

Some of the BPL devices are actually designed to network other broadband technologies, such as DSL.³⁷ Therefore, no further study is needed or warranted.

The UPLC also reiterates that BPL systems will not adversely affect power line carrier systems, because they are located on completely different segments of the grid, and operate on completely different frequencies.³⁸ The IEEE has filed reply comments that take the same view. It states that the “PSRC’s initial comments in this docket were based on the *speculation* of interference and potential remedies by changing Part 15,” and that “while there are 2000+ comments from United States Amateurs, none of them are experiencing BPL interference from these trials.” Moreover, it adds that, “while calculations and gut feeling are appropriate reasons to raise questions, the FCC sanctioned field trials provide real data that should be used to determine if any changes need to be made to Part 15.”³⁹ Bottom line: the IEEE concluded that, “no changes are needed with regard to PLC emissions or equipment certification.”⁴⁰ The UPLC supports the views of the IEEE in its reply comments, which contradict comments concerning interference to PLC systems on the record.⁴¹

³⁷ See e.g. Comments of HomePlug at 8 (filed July 7, 2003) (stating that HomePlug developers specifically aim to provide HomePlug products for distributing broadband access throughout homes served with DSL and cable modem services. HomePlug and DSL use different frequency ranges and cable modems use shielded cables, and this ensures that there will be no interference between HomePlug devices and DSL and cable modems); and Comments of PowerWAN at 3 (BPL in-house and DSL appear to co-locate together well, as they are both used in the home of a PowerWAN, Inc. employee. We are also aware of others that use BPL in-house and cable modem access without interference.)

³⁸ Comments of the UPLC at 17-18 (filed July 7, 2003).

³⁹ Reply Comments of the IEEE Power Systems Relaying Committee at 2 (filed August 18, 2003).

⁴⁰ *Id.*

⁴¹ See e.g. Comments of Echelon Corp. at 7 (filed Aug. 6, 2003) (urging the Commission to limit the emissions of BPL systems under Part 15 due to the potential for substantial interference with existing PLC applications.) But see Comments of PPL Telcom at 7 (testing and operation of both the BPL and AMR

equipment in the trial locations indicate that there is no interference from the introduction of BPL technology).

VI. Other matters

The Commission consciously decided not to visit broad policy issues concerning BPL systems in this proceeding. Among the policy issues that were considered -- but not raised in the NOI -- were pole attachments, affiliate transactions, and universal service.⁴² Nonetheless, some parties can't take a hint.⁴³ Therefore, the Commission should ignore comments that address these issues.

VII. Conclusion

Utilities have been and remain extremely sensitive about the issue of harmful interference. The communications equipment that they use is designed, built and operated to the highest standards. As testament, even after the World Trade Center collapsed, conEd systems remained operational and were instrumental in providing emergency communications. In short, utilities do have a reputation for deploying safe, reliable and secure communications networks.⁴⁴

That reputation applies equally to the BPL systems that are currently under trial. Utilities have conducted the trials under experimental authority from the FCC and have worked with the FCC to ensure that they do not cause harmful interference. Some of these trials have been ongoing since 2001, and are situated in various parts of the

⁴² See Separate Statements of Commissioner Copps and Commissioner Adelstein to the BPL NOI.

⁴³ See e.g. Comments of Joint Cable Operators (filed July 7, 2003) (urging the Commission to ensure that electric utilities deploying BPL do not use their control over poles in an anti-competitive manner); and Comments of Knology, Inc. (filed July 7, 2003) (urging the Commission to establish conditions precedent to electric utility entry into the broadband marketplace as part of a rulemaking on pole attachments.).

⁴⁴ Compare Comments of ARRL at 3-4 (reporting that utilities have been "non-responsive" to complaints about interference from electric power lines). The UPLC strongly objects to this characterization. Utilities do respond to complaints, and incur substantial costs to correct them when the complaints are credible. Although the Commission has sent letters to the utilities to correct interference, even the ARRL admits on its website that the letters are essentially advisory in nature and do not necessarily mean that a violation has occurred.

country, serving residential and business customers via different network configurations. Therefore, utilities are thoroughly testing BPL equipment under variable conditions in order to ensure that they do not interfere with other licensed users and do not impair utility operations.

The results of these tests are encouraging and utilities are ready to provide BPL to their customers for a range of commercial services and to improve the quality of electric services in a manner that promotes energy efficiency and national security for the nation. This is the vision of BPL. The UPLC urges the Commission to develop rules and policies for BPL that help make that vision a reality, and looks forward to working with the Commission in the future.

WHEREFORE, THE PREMISES CONSIDERED, the UPLC is pleased to provide these reply comments on the NOI.

Respectfully submitted,

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August 20, 2003